CONTENTS

Volume 51 Number 1 1979

W. G. Pearcy, H. V. Lorz, W. Peterson
Comparison of the Feeding Habits of Migratory and Non-Migratory *Stenobrachius leucopsarus* (Myctophidae) 1

R. Pocklington
An Oceanographic Interpretation of Seabird Distributions in the Indian Ocean 9

J. M. Colebrook
Continuous Plankton Records: Seasonal Cycles of Phytoplankton and Copepods in the North Atlantic Ocean and the North Sea 23

A. R. Strøm
Biosynthesis of Trimethylamine Oxide in Calanoid Copepods. Seasonal Changes in Trimethylamine Monooxygenase Activity 33

A. M. Alayse-Danet, J. L. Charlou, M. Jézéquel, J. F. Samain
Modèle de détection rapide des effets sublétaux des polluants: Modification des taux d'amylase et de trypsine d'*Artemia salina* contaminées par le cuivre ou le zinc. [Model of Rapid Detection of Sublethal Effects of Pollutants: Modification of Amylase and Trypsin Levels of *Artemia salina* Contaminated by Copper and Zinc] 41

J. R. Jennings, P. S. Rainbow
Accumulation of Cadmium by *Artemia salina* 47

M. H. Thurston
Scavenging Abyssal Amphipods from the North-East Atlantic Ocean 55

J. Babinchak, R. Ukeles
Epifluorescence Microscopy, a Technique for the Study of Feeding in *Crassostrea virginica* Veliger Larvae 69

W. Nultsch, J. Pfau
Occurrence and Biological Role of Light-Induced Chromatophore Displacements in Seaweeds 77

J. S. Pearse, A. H. Hines
Expansion of a Central California Kelp Forest Following the Mass Mortality of Sea Urchins 83

Volume 51 Number 2 1979

P. F. Newell, T. C. Appleton, B. E. Brown, J. W. Carnwarth
Elemental Distribution in Relation to Skin Necroses of Marine Flatfishes from the English Channel 93

O. Lindén, J. R. Sharp, R. Laughlin, Jr., J. M. Neff
Interactive Effects of Salinity, Temperature and Chronic Exposure to Oil on the Survival and Developmental Rate of Embryos of the Estuarine Killifish *Fundulus heteroclitus* 101

J. S. Lucas, J. D. Costlow, Jr.
Effects of Various Temperature Cycles on the Larval Development of the Gastropod Mollusc *Crepidula fornicata* 111

S. M. Louda
Distribution, Movement and Diet of the Snail *Searlesia dira* in the Intertidal Community of San Juan Island, Puget Sound, Washington 119

L. S. Eyster
Reproduction and Developmental Variability in the Opisthobranch *Tenellia pallida* 133

C. L. Griffiths, J. A. King
Some Relationships Between Size, Food Availability and Energy Balance in the Ribbed Mussel *Aulacomya ater* 141

S. Uye, S. Kasahara, T. Onbé
Calanoid Copepod Eggs in Sea-Bottom Muds. IV. Effects of Some Environmental Factors on the Hatching of Resting Eggs 151

C. J. Chapman, F. G. Howard
Field Observations on the Emergence Rhythm of the Norway Lobster *Nephrops norvegicus*, Using Different Methods 157

M. J. Keough, A. J. Butler
The Role of Asteroid Predators in the Organization of a Sessile Community on Pier Pilings 167

B. B. Bernstein, J. P. Meador
Temporal Persistence of Biological Patch Structure in an Abyssal Benthic Community 179

R. T. Paine, C. J. Slocum, D. O. Duggins
Growth and Longevity in the Crustose Red Alga *Petrocelis middendorffii* 185

Corrigendum Notice 193

Volume 51 Number 3 1979

H. von Westernhagen, H. Rosenthal, S. Kerr, G. Fürstenberg
Factors Influencing Predation of *Hyperoche medusarum* (Hyperiida: Amphipoda) on Larvae of the Pacific Herring *Clupea harengus pallasi* 195

J. R. Sargent, R. McIntosh, A. Bauermeister, J. H. S. Blaxter
Assimilation of the Wax Esters of Marine Zooplankton by Herring *(Clupea harengus)* and Rainbow Trout *(Salmo gairdnerii)* 203

M. Y. Ünlü, S. W. Fowler
Factors Affecting the Flux of Arsenic Through the Mussel *Mytilus galloprovincialis* 209

D. J. Brousseau
Analysis of Growth Rate in *Mya arenaria* Using the Von Bertalanffy Equation 221

D. L. Leighton
A Growth Profile for the Rock Scallop *Hinnites multirugosus* Held at Several Depths off La Jolla, California 229

L. F. Small, S. W. Fowler, M. Y. Ünlü
Sinking Rates of Natural Copepod Fecal Pellets 233

A. N. Sastry
Metabolic Adaptation of *Cancer irroratus* Developmental Stages to Cyclic Temperatures 243

B. V. Nelson, R. R. Vance
Diel Foraging Patterns of the Sea Urchin *Centrostephanus coronatus* as a Predator Avoidance Strategy 251

J. Lewin, Ching-hong Chen, T. Hruby
Blooms of Surf-Zone Diatoms Along the Coast of the Olympic Peninsula, Washington. X. Chemical Composition of the Surf Diatom *Chaetoceros armatum* and Its Major Herbivore, the Pacific Razor Clam *Siliqua patula* 259

V. N. de Jonge
Quantitative Separation of Benthic Diatoms from Sediments Using Density Gradient Centrifugation in the Colloidal Silica Ludox-TM 267

J. S. Lytle, T. F. Lytle, J. N. Gearing, P. J. Gearing
Hydrocarbons in Benthic Algae from the Eastern Gulf of Mexico 279

C. Yarish, P. Edwards, S. Casey
Acclimation Responses to Salinity of Three Estuarine Red Algae from New Jersey 289

Volume 51 Number 4 1979

G. Indrebø, B. Pengerud, I. Dundas
Microbial Activities in a Permanently Stratified Estuary. I. Primary Production and Sulfate Reduction 295

G. Indrebø, B. Pengerud, I. Dundas
Microbial Activities in a Permanently Stratified Estuary. II. Microbial Activities at the Oxic-Anoxic Interface 305

R. W. Hickman
Allometry and Growth of the Green-Lipped Mussel *Perna canaliculus* in New Zealand 311

I. D. Marsden
Seasonal Oxygen Consumption of the Saltmarsh Isopod *Sphaeroma rugicauda* 329

P. I. Blades, M. J. Youngbluth
Mating Behavior of *Labidocera aestiva* (Copepoda: Calanoida) 339

G. Champalbert, P. Kerambrun
Influence du mode de conservation sur la composition chimique élémentaire de *Pontella mediterranea* (Copepoda: Pontellidae). [Influence of Method of Preservation on the Elementary Chemical Composition of *Pontella mediterranea* (Copepoda: Pontellidae)] 357

D. L. Meyer
Length and Spacing of the Tube Feet in Crinoids (Echinodermata) and Their Role in Suspension-Feeding 361

R. E. Young, C. F. E. Roper, J. F. Walters
Eyes and Extraocular Photoreceptors in Midwater Cephalopods and Fishes: Their Roles in Detecting Downwelling Light for Counterillumination 371

R. E. Brock
An Experimental Study on the Effects of Grazing by Parrotfishes and Role of Refuges in Benthic Community Structure 381

Indexed in Current Contents